

Docket No.: 10271-037-999

Serial No.: 10/015,085

Inventor(s): LANGERMANN et al.  
 Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
 ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

atg agt aat aaa aac gtc aat gta agg aaa tcg cag gaa ata aca ttc Met Ser Asn Lys Asn Val Asn Val Arg Lys Ser Gln Glu Ile Thr Phe 1 5 10 15	48
tgc ttg ctg gca ggt atc ctg atg ttc atg gca atg atg gtt gcc gga Cys Leu Leu Ala Gly Ile Leu Met Phe Met Ala Met Met Val Ala Gly 20 25 30	96
cgc gct gaa gcg gga gtg gcc tta ggt gcg act cgc gta att tat ccg Arg Ala Glu Ala Gly Val Ala Leu Gly Ala Thr Arg Val Ile Tyr Pro 35 40 45	144
gca ggg caa aaa caa gtg caa ctt gcc gtg aca aat aat gat gaa aat Ala Gly Gln Lys Gln Val Gln Leu Ala Val Thr Asn Asn Asp Glu Asn 50 55 60	192
agt acc tat tta att caa tca tgg gtg gaa aat gcc gat ggt gta aag Ser Thr Tyr Leu Ile Gln Ser Trp Val Glu Asn Ala Asp Gly Val Lys 65 70 75 80	240
gat ggt cgt ttt atc gtg acg cct cct ctg ttt gcg atg aag gga aaa Asp Gly Arg Phe Ile Val Thr Pro Pro Leu Phe Ala Met Lys Gly Lys 85 90 95	288
aaa gag aat acc tta cgt att ctt gat gca aca aat aac caa ttg cca Lys Glu Asn Thr Leu Arg Ile Leu Asp Ala Thr Asn Asn Gln Leu Pro 100 105 110	336
cag gac cggt gaa aat tta ttc tgg atg aac gtt aaa gcg att ccg tca Gln Asp Arg Glu Ser Leu Phe Trp Met Asn Val Lys Ala Ile Pro Ser 115 120 125	384
atg gat aaa tca aaa ttg act gag aat acg cta cag ctc gca att atc Met Asp Lys Ser Lys Leu Thr Glu Asn Thr Leu Gln Leu Ala Ile Ile 130 135 140	432
agc cgc att aaa ctg tac tat cgc ccg gct aaa tta gcg ttg cca ccc Ser Arg Ile Lys Leu Tyr Tyr Arg Pro Ala Lys Leu Ala Leu Pro Pro 145 150 155 160	480
gat cag gcc gca gaa aaa tta aga ttt cgt cgt agc gcg aat tct ctg Asp Gln Ala Ala Glu Lys Leu Arg Phe Arg Arg Ser Ala Asn Ser Leu 165 170 175	528
acg ctg att aac ccg aca ccc tat tac ctg acg gta aca gag ttg aat Thr Leu Ile Asn Pro Thr Pro Tyr Tyr Leu Thr Val Thr Glu Leu Asn 180 185 190	576

10015085.051302

Docket No.: 10271-037-999

Serial No.: 10/015,085

Inventor(s): LANGERMANN et al.  
Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

gcc gga acc cgg gtt ctt gaa aat gca ttg gtg cct cca atg ggc gaa	624
Ala Gly Thr Arg Val Leu Glu Asn Ala Leu Val Pro Pro Met Gly Glu	
195 200 205	
agc acg gtt aaa ttg cct tct gat gca gga agc aat att act tac cga	672
Ser Thr Val Lys Leu Pro Ser Asp Ala Gly Ser Asn Ile Thr Tyr Arg	
210 215 220	
aca ata aat gat tat ggc gca ctt acc ccc aaa atg acg ggc gta atg	720
Thr Ile Asn Asp Tyr Gly Ala Leu Thr Pro Lys Met Thr Gly Val Met	
225 230 235 240	
gaa taa	726
Glu	

FIG. 1A-2

Met Ser Asn Lys Asn Val Asn Val Arg Lys Ser Gln Glu Ile Thr Phe  
1 5 10 15  
Cys Leu Leu Ala Gly Ile Leu Met Phe Met Ala Met Met Val Ala Gly  
20 25 30  
Arg Ala Glu Ala Gly Val Ala Leu Gly Ala Thr Arg Val Ile Tyr Pro  
35 40 45  
Ala Gly Gln Lys Gln Val Gln Leu Ala Val Thr Asn Asn Asp Glu Asn  
50 55 60  
Ser Thr Tyr Leu Ile Gln Ser Trp Val Glu Asn Ala Asp Gly Val Lys  
65 70 75 80  
Asp Gly Arg Phe Ile Val Thr Pro Pro Leu Phe Ala Met Lys Gly Lys  
85 90 95  
Lys Glu Asn Thr Leu Arg Ile Leu Asp Ala Thr Asn Asn Gln Leu Pro  
100 105 110  
Gln Asp Arg Glu Ser Leu Phe Trp Met Asn Val Lys Ala Ile Pro Ser  
115 120 125  
Met Asp Lys Ser Lys Leu Thr Glu Asn Thr Leu Gln Leu Ala Ile Ile  
130 135 140  
Ser Arg Ile Lys Leu Tyr Tyr Arg Pro Ala Lys Leu Ala Leu Pro Pro  
145 150 155 160  
Asp Gln Ala Ala Glu Lys Leu Arg Phe Arg Arg Ser Ala Asn Ser Leu  
165 170 175  
Thr Leu Ile Asn Pro Thr Pro Tyr Tyr Leu Thr Val Thr Glu Leu Asn  
180 185 190  
Ala Gly Thr Arg Val Leu Glu Asn Ala Leu Val Pro Pro Met Gly Glu  
195 200 205  
Ser Thr Val Lys Leu Pro Ser Asp Ala Gly Ser Asn Ile Thr Tyr Arg  
210 215 220  
Thr Ile Asn Asp Tyr Gly Ala Leu Thr Pro Lys Met Thr Gly Val Met  
225 230 235 240  
Glu

FIG. 1B

atg aaa cga gtt att acc ctg ttt gct gta ctg ctg atg ggc tgg tcg Met Lys Arg Val Ile Thr Leu Phe Ala Val Leu Leu Met Gly Trp Ser -20 -15 -10	48
gta aat gcc tgg tca ttc gcc tgt aaa acc gcc aat ggt acc gct atc Val Asn Ala Trp Ser Phe Ala Cys Lys Thr Ala Asn Gly Thr Ala Ile -5 -1 1 5 10	96
cct att ggc ggt ggc agc gcc aat gtt tat gta aac ctt gcg ccc gtc Pro Ile Gly Gly Ser Ala Asn Val Tyr Val Asn Leu Ala Pro Val 15 20 25	144
gtg aat gtg ggg caa aac ctg gtc gtg gat ctt tcg acg caa atc ttt Val Asn Val Gly Gln Asn Leu Val Val Asp Leu Ser Thr Gln Ile Phe 30 35 40	192
tgc cat aac gat tat ccg gaa acc att aca gac tat gtc aca ctg caa Cys His Asn Asp Tyr Pro Glu Thr Ile Thr Asp Tyr Val Thr Leu Gln 45 50 55	240
cga ggc tcg gct tat ggc ggc gtg tta tct aat ttt tcc ggg acc gta Arg Gly Ser Ala Tyr Gly Gly Val Leu Ser Asn Phe Ser Gly Thr Val 60 65 70 75	288
aaa tat agt ggc agt agc tat cca ttt cct acc acc agc gaa acg ccg Lys Tyr Ser Gly Ser Ser Tyr Pro Phe Pro Thr Thr Ser Glu Thr Pro 80 85 90	336
cgc gtt gtt tat aat tcg aga acg gat aag ccg tgg ccg gtg gcg ctt Arg Val Val Tyr Asn Ser Arg Thr Asp Lys Pro Trp Pro Val Ala Leu 95 100 105	384
tat ttg acg cct gtg agc agt gcg ggc ggg gtg gcg att aaa gct ggc Tyr Leu Thr Pro Val Ser Ser Ala Gly Gly Val Ala Ile Lys Ala Gly 110 115 120	432
tca tta att gcc gtg ctt att ttg cga cag acc aac aac tat aac agc Ser Leu Ile Ala Val Leu Ile Leu Arg Gln Thr Asn Asn Tyr Asn Ser 125 130 135	480
gat gat ttc cag ttt gtg tgg aat att tac gcc aat aat gat gtg gtg Asp Asp Phe Gln Phe Val Trp Asn Ile Tyr Ala Asn Asn Asp Val Val 140 145 150 155	528
gtg cct act ggc ggc tgc gat gtt tct gct cgt gat gtc acc gtt act Val Pro Thr Gly Gly Cys Asp Val Ser Ala Arg Asp Val Thr Val Thr 160 165 170	576

10015085 .051302

Docket No.: 10271-037-999

Serial No.: 10/015,085

Inventor(s): LANGERMANN et al.

Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FmCH CRYSTAL STRUCTURE"

ctg ccg gac tac cct ggt tca gtg cca att cct ctt acc gtt tat tgt		624
Leu Pro Asp Tyr Pro Gly Ser Val Pro Ile Pro Leu Thr Val Tyr Cys		
175	180	185
gcg aaa agc caa aac ctg ggg tat tac ctc tcc ggc aca acc gca gat		672
Ala Lys Ser Gln Asn Leu Gly Tyr Tyr Leu Ser Gly Thr Thr Ala Asp		
190	195	200
gcg ggc aac tcg att ttc acc aat acc gcg tcg ttt tca cct gca cag		720
Ala Gly Asn Ser Ile Phe Thr Asn Thr Ala Ser Phe Ser Pro Ala Gln		
205	210	215
ggc gtc ggc gta cag ttg acg cgc aac ggt acg att att cca gcg aat		768
Gly Val Gly Val Gln Leu Thr Arg Asn Gly Thr Ile Ile Pro Ala Asn		
220	225	230
aac acg gta tcg tta gga gca gta ggg act tcg gcg gtg agt ctg gga		816
Asn Thr Val Ser Leu Gly Ala Val Gly Thr Ser Ala Val Ser Leu Gly		
240	245	250
tta acg gca aat tat gca cgt acc gga ggg cag gtg act gca ggg aat		864
Leu Thr Ala Asn Tyr Ala Arg Thr Gly Gly Gln Val Thr Ala Gly Asn		
255	260	265
gtg caa tcg att att ggc gtg act ttt gtt tat caa taa		903
Val Gln Ser Ile Ile Gly Val Thr Phe Val Tyr Gln		
270	275	

FIG.1C-2

10015085 , 051302

Docket No.: 10271-037-999

Serial No.: 10/015,085

Inventor(s): LANGERMANN et al.  
Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

Met Lys Arg Val Ile Thr Leu Phe Ala Val Leu Leu Met Gly Trp Ser  
 -20 -15 -10  
 Val Asn Ala Trp Ser Phe Ala Cys Lys Thr Ala Asn Gly Thr Ala Ile  
 -5 -1 1 5 10  
 Pro Ile Gly Gly Ser Ala Asn Val Tyr Val Asn Leu Ala Pro Val  
 15 20 25  
 Val Asn Val Gly Gln Asn Leu Val Val Asp Leu Ser Thr Gln Ile Phe  
 30 35 40  
 Cys His Asn Asp Tyr Pro Glu Thr Ile Thr Asp Tyr Val Thr Leu Gln  
 45 50 55  
 Arg Gly Ser Ala Tyr Gly Val Leu Ser Asn Phe Ser Gly Thr Val  
 60 65 70 75  
 Lys Tyr Ser Gly Ser Ser Tyr Pro Phe Pro Thr Thr Ser Glu Thr Pro  
 80 85 90  
 Arg Val Val Tyr Asn Ser Arg Thr Asp Lys Pro Trp Pro Val Ala Leu  
 95 100 105  
 Tyr Leu Thr Pro Val Ser Ser Ala Gly Gly Val Ala Ile Lys Ala Gly  
 110 115 120  
 Ser Leu Ile Ala Val Leu Ile Leu Arg Gln Thr Asn Asn Tyr Asn Ser  
 125 130 135  
 Asp Asp Phe Gln Phe Val Trp Asn Ile Tyr Ala Asn Asn Asp Val Val  
 140 145 150 155  
 Val Pro Thr Gly Gly Cys Asp Val Ser Ala Arg Asp Val Thr Val Thr  
 160 165 170  
 Leu Pro Asp Tyr Pro Gly Ser Val Pro Ile Pro Leu Thr Val Tyr Cys  
 175 180 185  
 Ala Lys Ser Gln Asn Leu Gly Tyr Tyr Leu Ser Gly Thr Thr Ala Asp  
 190 195 200  
 Ala Gly Asn Ser Ile Phe Thr Asn Thr Ala Ser Phe Ser Pro Ala Gln  
 205 210 215  
 Gly Val Gly Val Gln Leu Thr Arg Asn Gly Thr Ile Ile Pro Ala Asn  
 220 225 230 235  
 Asn Thr Val Ser Leu Gly Ala Val Gly Thr Ser Ala Val Ser Leu Gly  
 240 245 250  
 Leu Thr Ala Asn Tyr Ala Arg Thr Gly Gly Gln Val Thr Ala Gly Asn  
 255 260 265  
 Val Gln Ser Ile Ile Gly Val Thr Phe Val Tyr Gln  
 270 275

FIG.1D

Docket No.: 10271-037-999

Serial No.: 10/015,085

Inventor(s): LANGERMANN et al.

Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"



FIG. 2A

10015085 . 051302

Docket No.: 10271-037-999

- Serial No.: 10/015,085

Inventor(s): LANGERMANN et al.  
Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

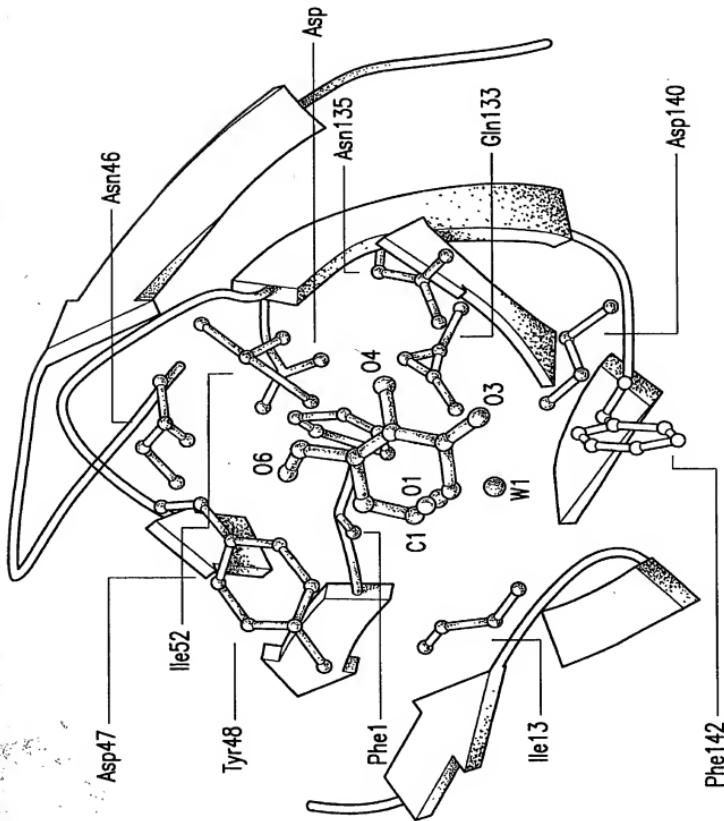


FIG.2B

10015085.05.1302

Docket No.: 10271-037-999

Serial No.: 10/015,085

Inventor(s): LANGERMANN et al.

Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

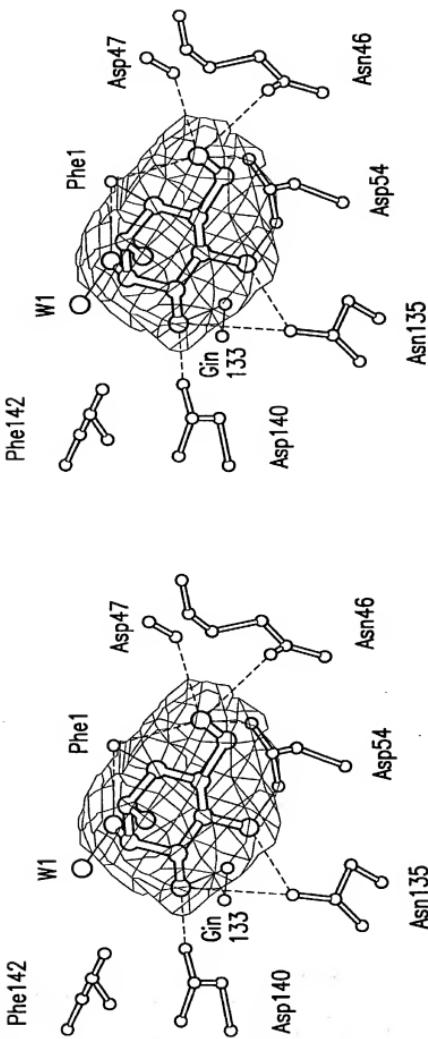


FIG.2C

Docket No.: 10271-037-999

Serial No.: 10/015,085

Inventor(s): LANGERMANN et al.  
Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

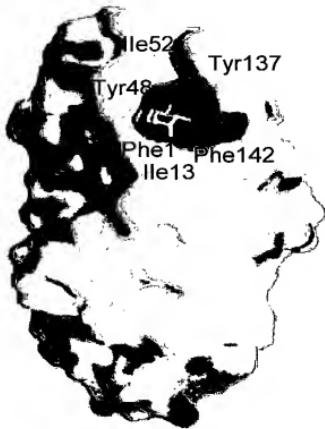


FIG.2D

10015085 .051302

Docket No.: 10271-037-999

Serial No.: 10/015,085

Inventor(s): LANGERMANN et al.

Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

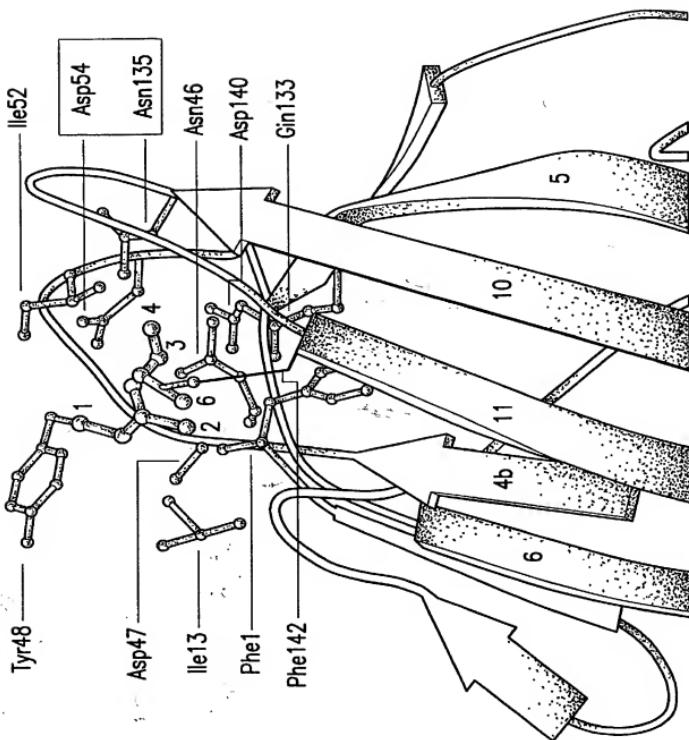


FIG.2E

FIG. 3

J96 EC45  
B217 DS17  
B212 EC42  
B210 B228  
B238 B240  
B242 EC58  
EC60 EC61  
EC80 EC95  
EC18

100115085 . 05.1302

Docket No.: 10271-037-999

Serial No : 10/015,085

Inventor(s). LANGERMANN et al.  
Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

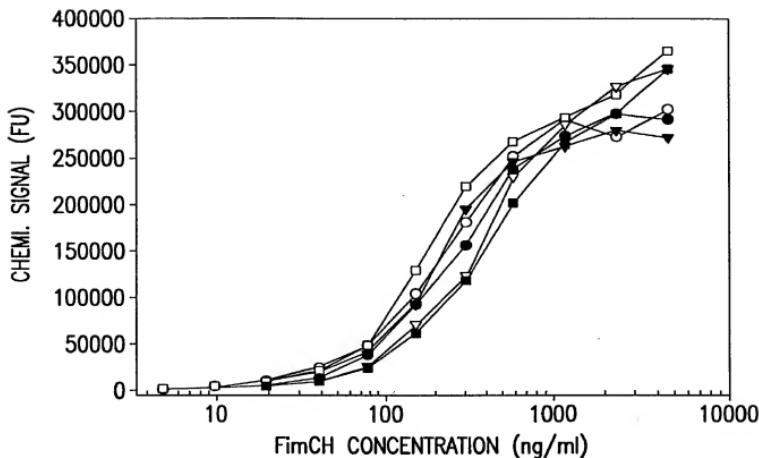


FIG.4



FIG.5A

10015085.051302

Docket No. 10271-037-999

Serial No. 10/015,085

Inventor(s). LANGERMANN et al.

Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

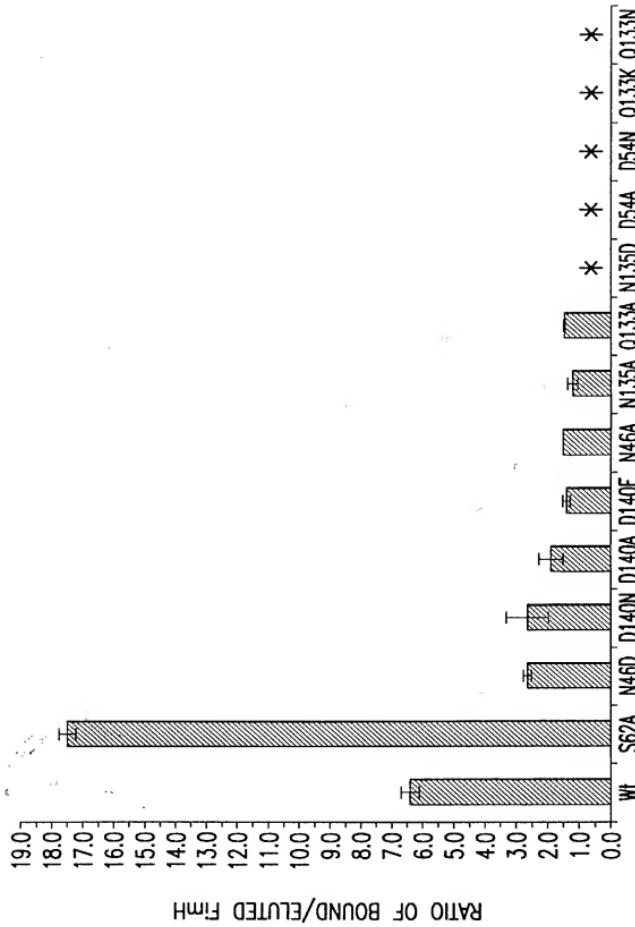


FIG. 5B

10015085, 051382

Docket No.: 10271-037-999

Serial No.: 10/015,085

Inventor(s): LANGERMANN et al  
Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

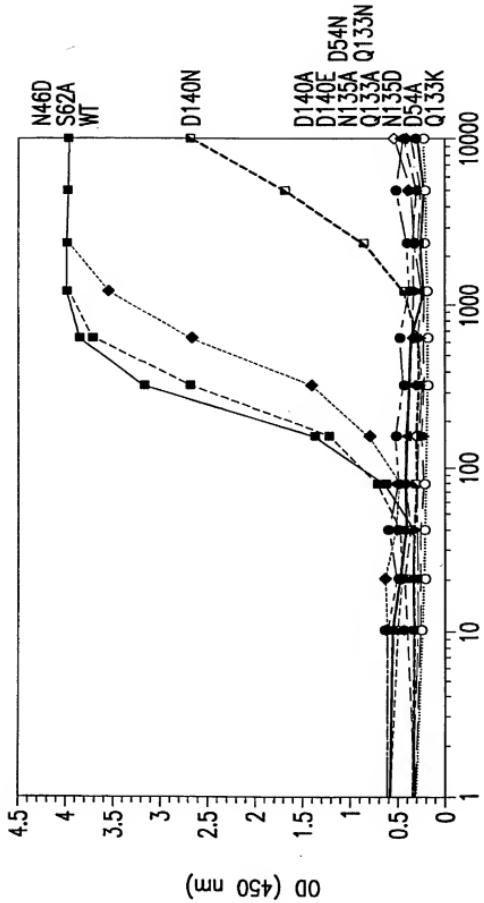


FIG.6A-1

100015085 . 051302

Docket No : 10271-037-999

Serial No : 10/015,085

Inventor(s): LANGERMANN et al.  
Title "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

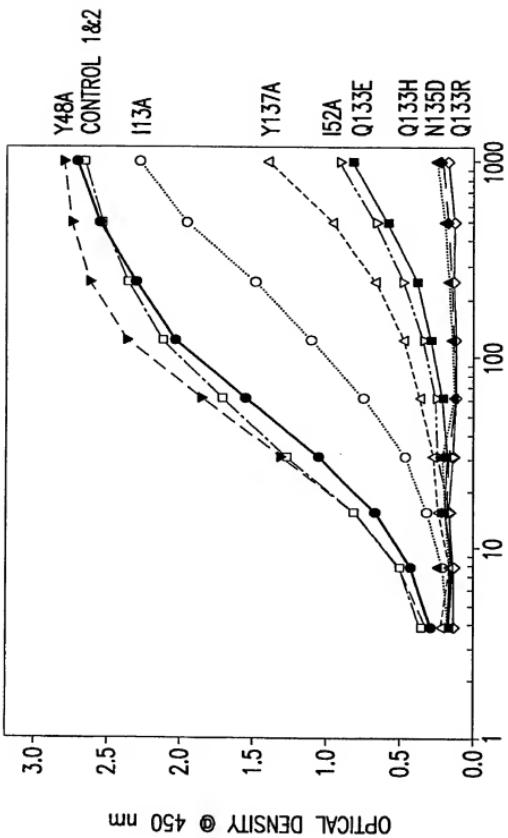


FIG.6A-2

100015085 . 061302

Docket No.: 10271-037-999

Serial No.: 10/015,085

Inventor(s): LANGERMANN et al  
Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

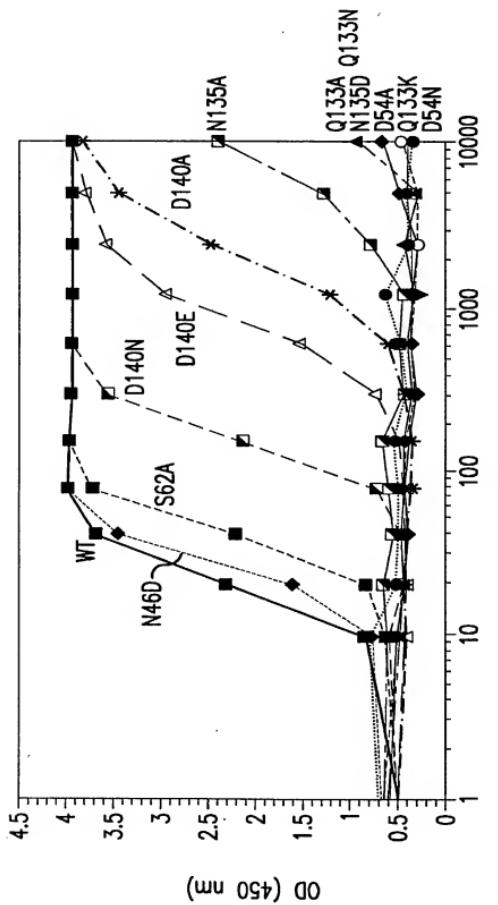


FIG. 6B-1

100015085.051302

Docket No. 10271-037-999

Serial No. 10/015,085

Inventor(s): LANGERMANN et al.  
Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

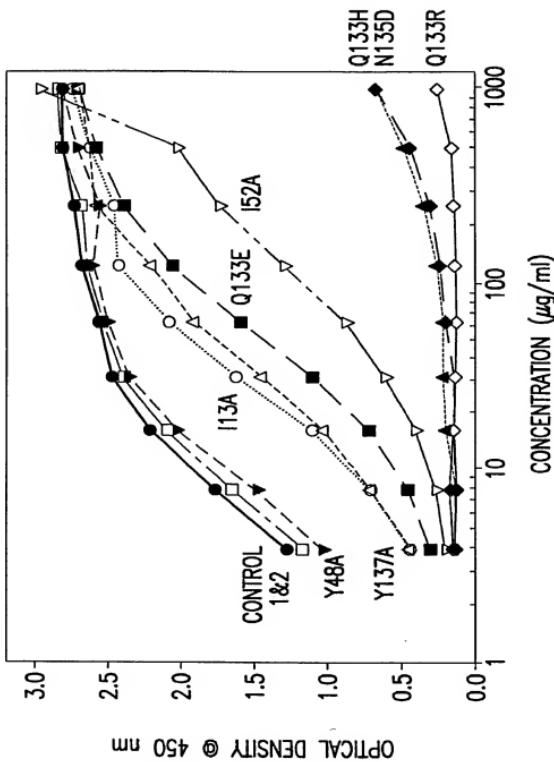


FIG. 6B-2

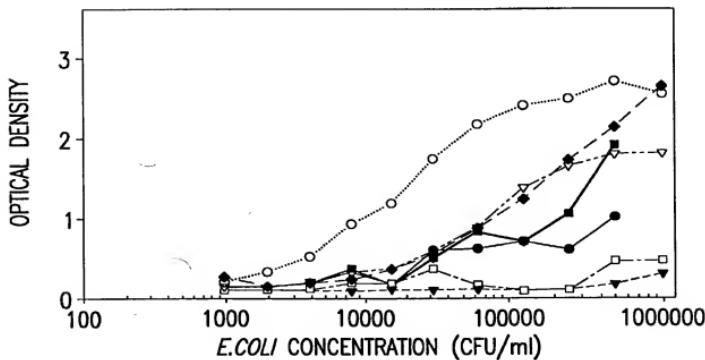


FIG.7A

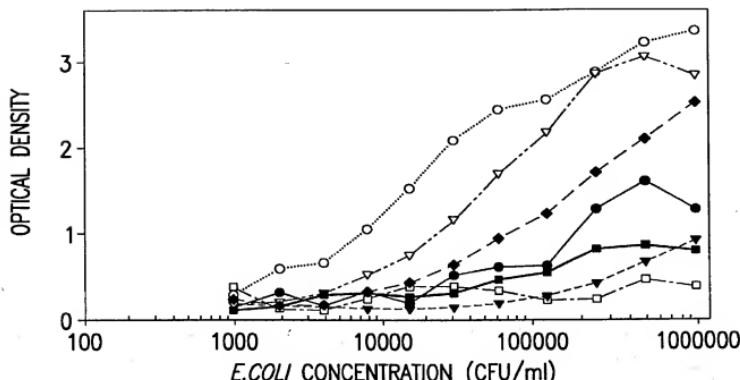


FIG.7B

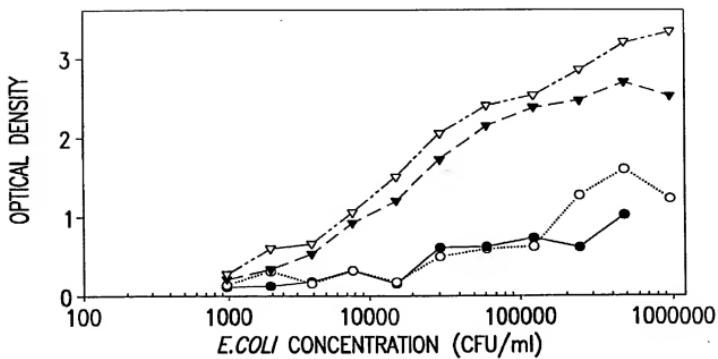


FIG.7C

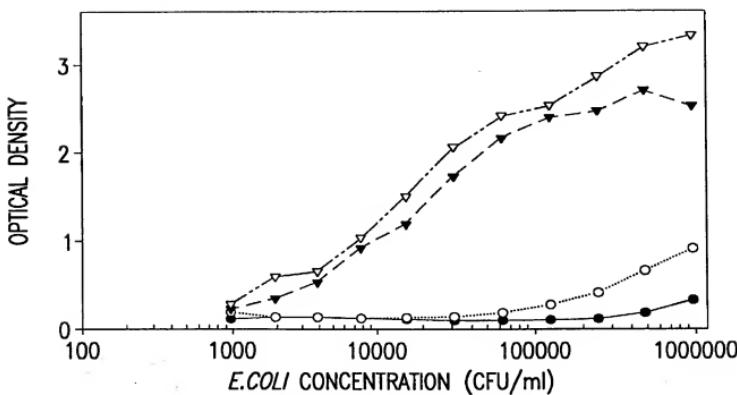


FIG.7D

10015085 .051302

Docket No. 10271-037-998

Serial No. 10/015,085

Inventor(s) LANGERMANN et al.  
Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

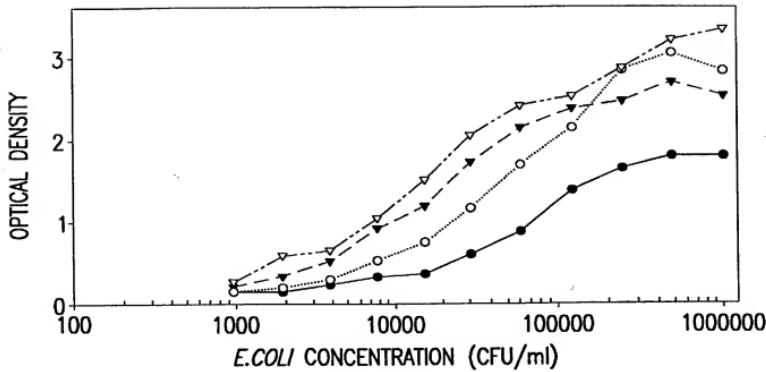


FIG.7E

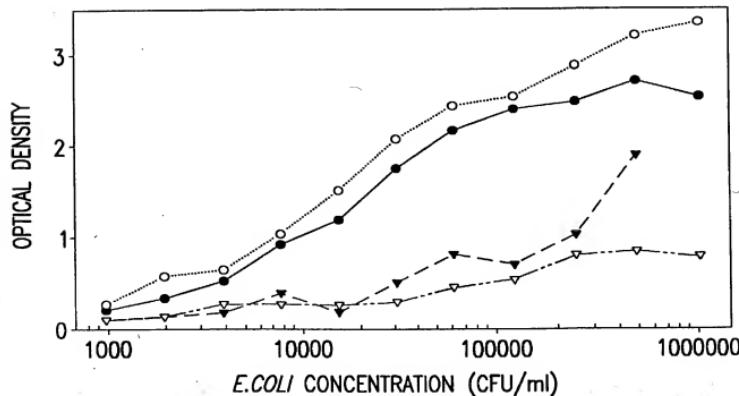


FIG.7F

10015085 . 051302

Docket No : 10271-037-999

Serial No.: 10/015,085

Inventor(s): LANGERMANN et al.

Title. "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

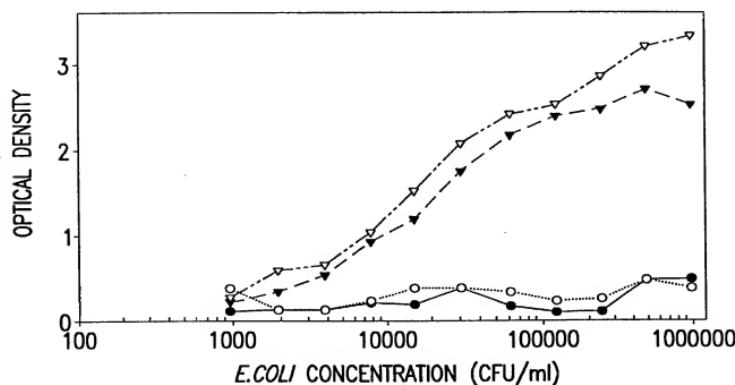


FIG.7G

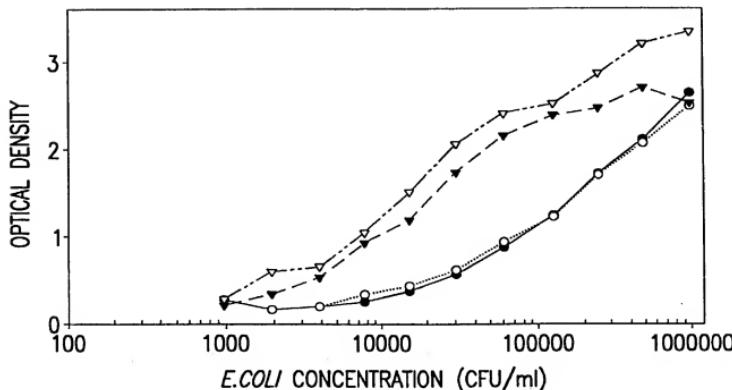


FIG.7H

100.15085.1061382

Docket No.: 10271-037-999

Serial No.: 10015.085

Inventor(s): LANGERMANN et al.

Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

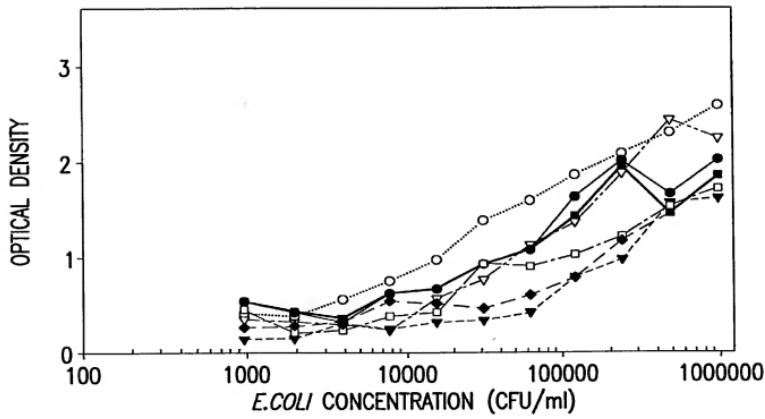


FIG.7I

10015085 . 051302

Docket No. 10271-037-999

Serial No. 10/015,085

Inventor(s) LANGERMANN et al.  
Title "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

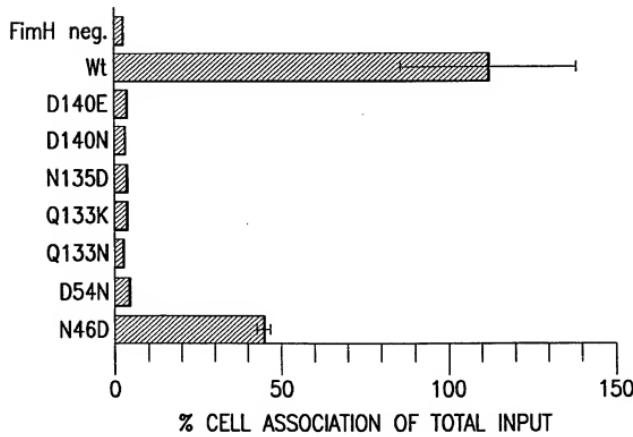
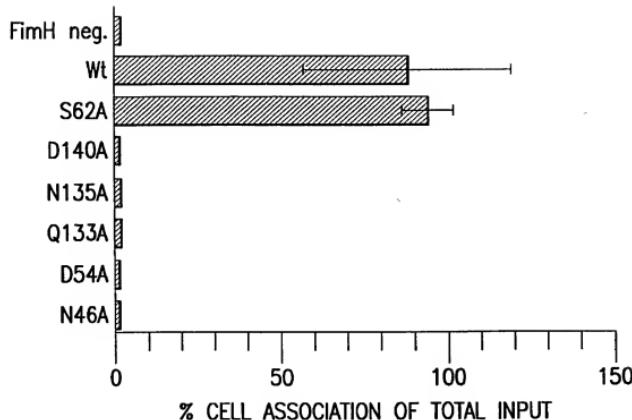


FIG.8A

10015085 . 051302

Docket No : 10271-037-999

Serial No : 10/015,085

Inventor(s): LANGERMANN et al.

Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

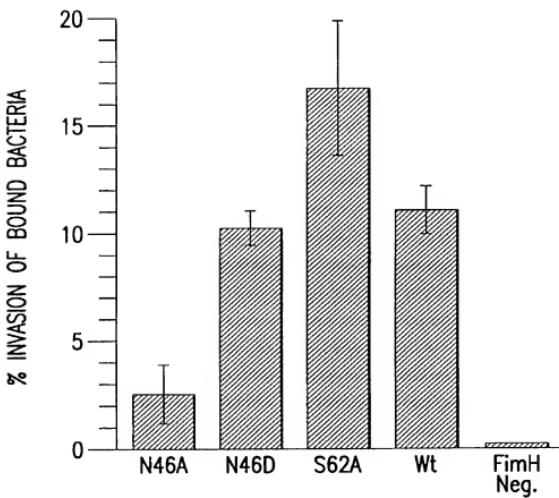


FIG.8B

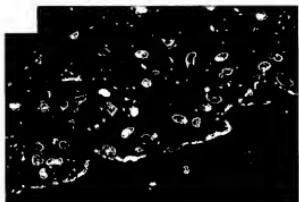


FIG.9A

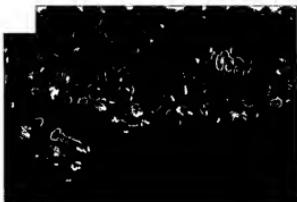


FIG.9B

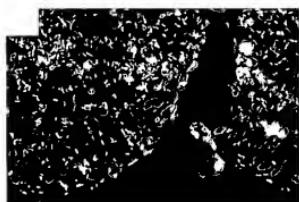


FIG.9C

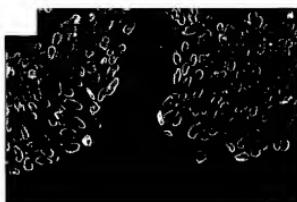


FIG.9D



FIG.9E

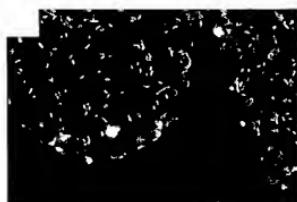


FIG.9F

Docket No.: 10271-037-999

Serial No.: 10/015,085

Inventor(s): LANGERMANN et al  
Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

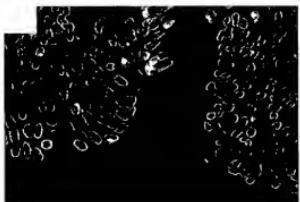


FIG.9G

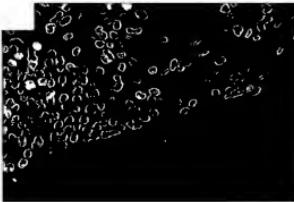


FIG.9H



FIG.9I



FIG.9J

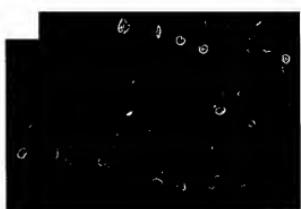


FIG.9K

1003 DOB6 . 051302

Docket No. 10271-037-999

Serial No. 10/015,085

Inventor(s): LANGERMANN et al.  
Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

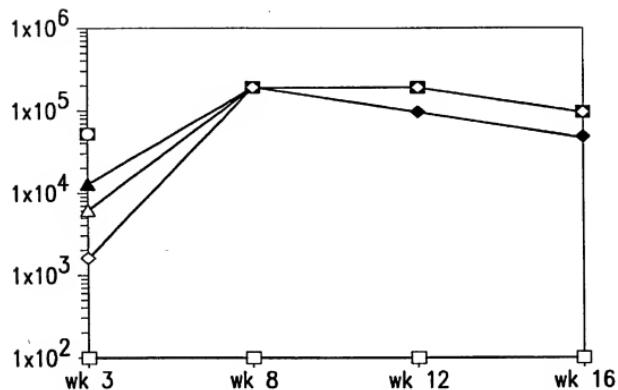


FIG.10A

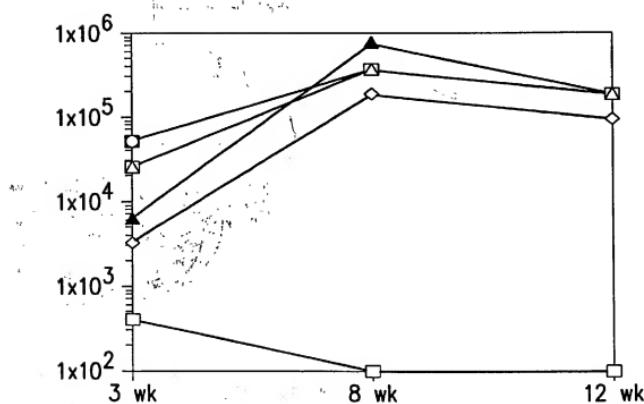


FIG.10B

10015095 . 051302

Docket No.: 10271-037-999

Serial No.: 10/015,085

Inventor(s): LANGERMANN et al.  
Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

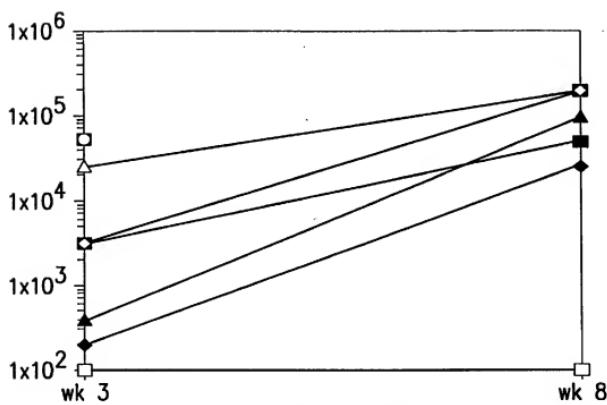


FIG.10C

Docket No : 10271-037-999

Serial No.: 10/015,085

Inventor(s): LANGERMANN et al.

Title "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

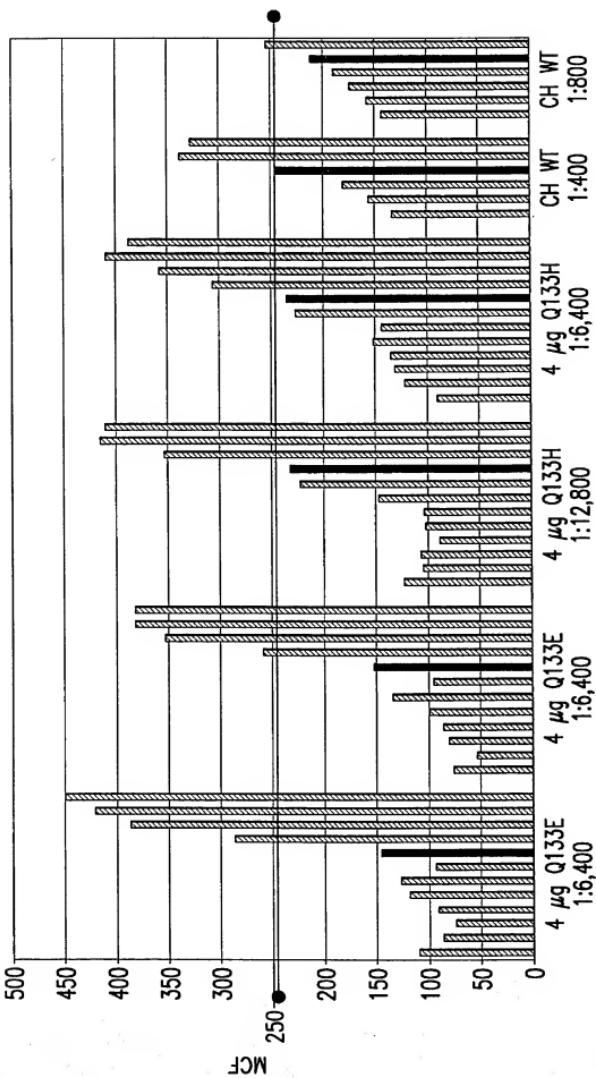


FIG. 1A

Docket No.: 10271-037-999  
Serial No.: 10/015,089

Inventor(s): LANGERMANN et al.  
Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

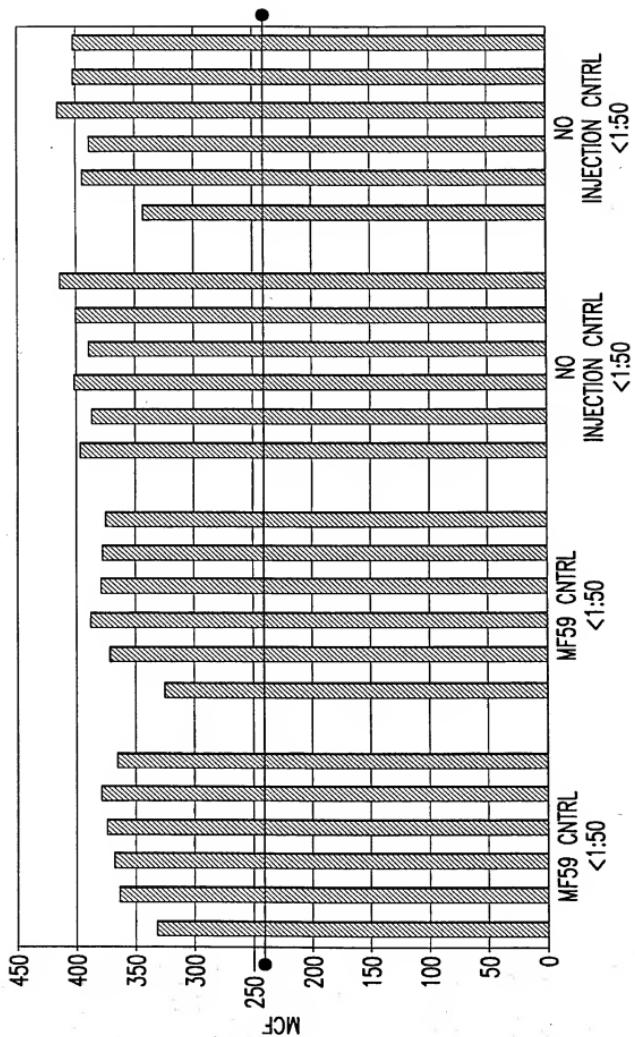


FIG. 11B

10015085.051302

Docket No.: 10271-037-999

- Serial No.: 10/015,085

Inventor(s): LANGERMANN et al.  
Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

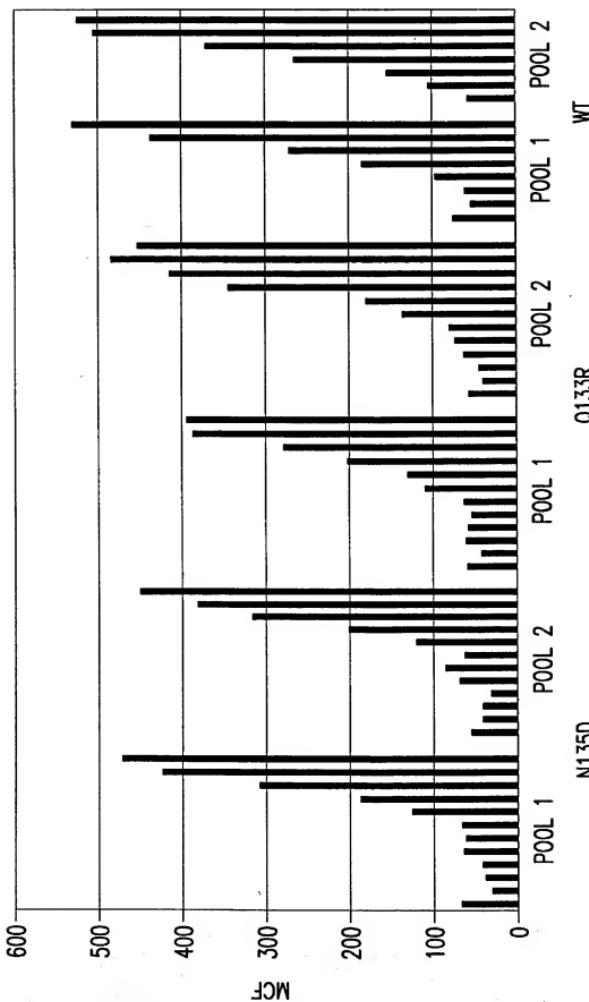


FIG. 11C

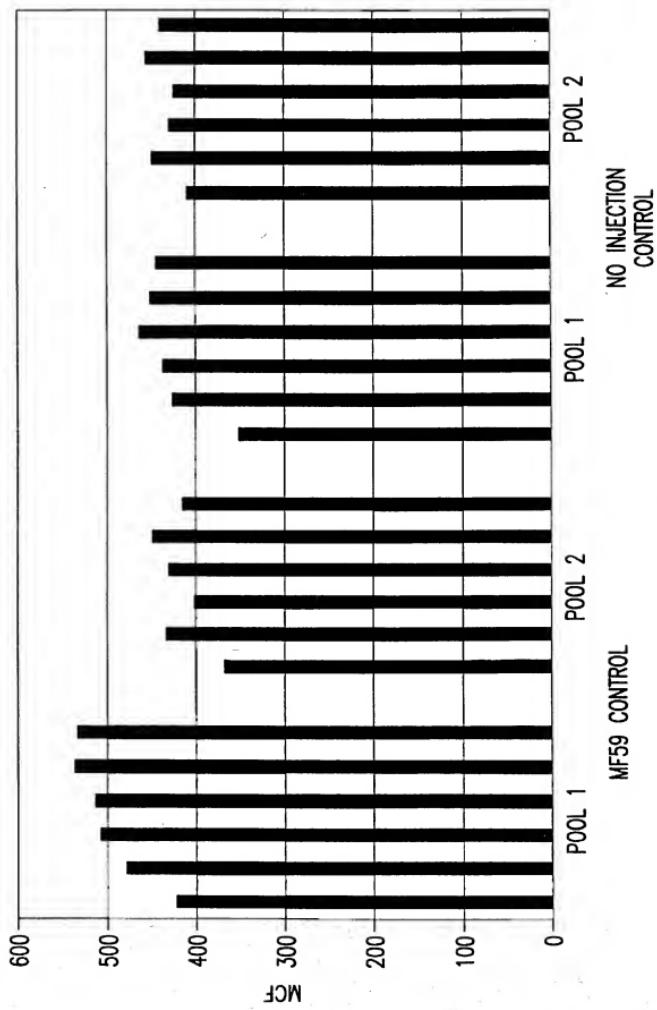


FIG. 11D

Docket No.: 10371-037-888

Serial No : 10/01E 08E

Inventor(s): LANGERMANN et al.

Inventor(s): LANGERMANN et al.  
Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FIRCH CRYSTAL STRUCTURE"

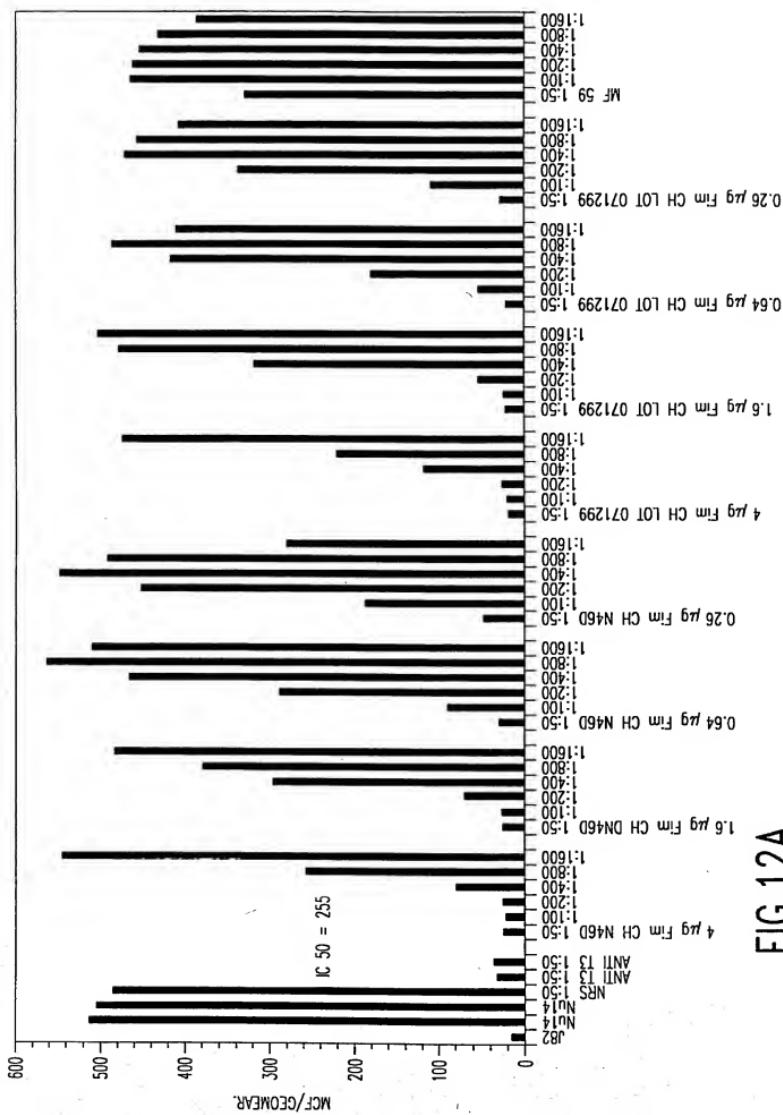


FIG. 12A

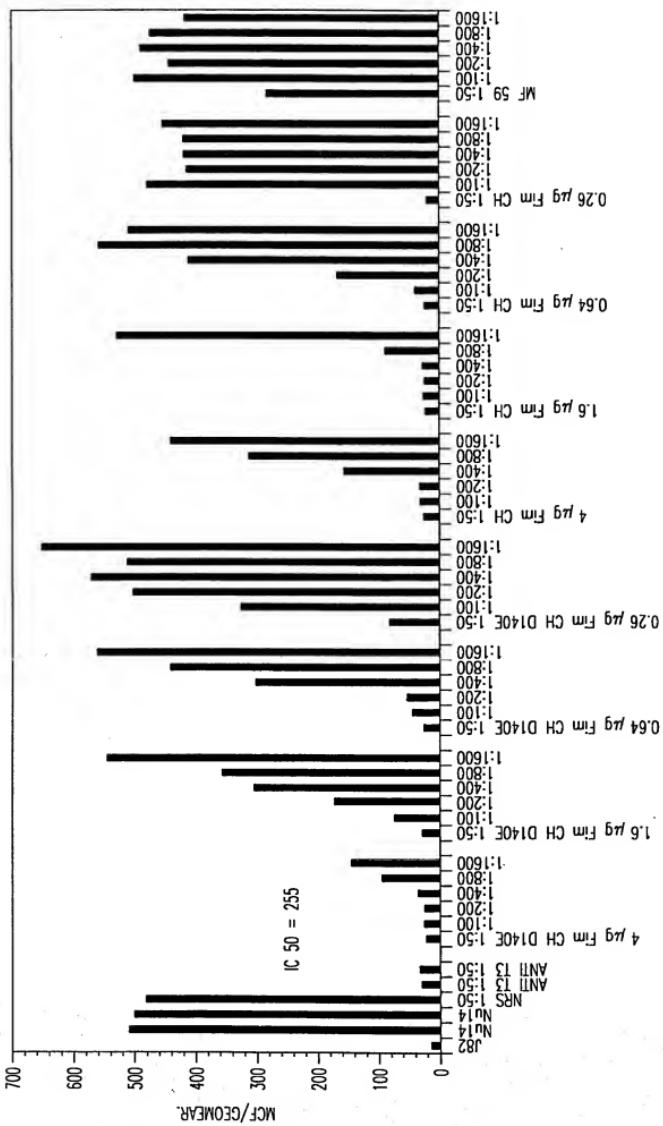


FIG. 12B

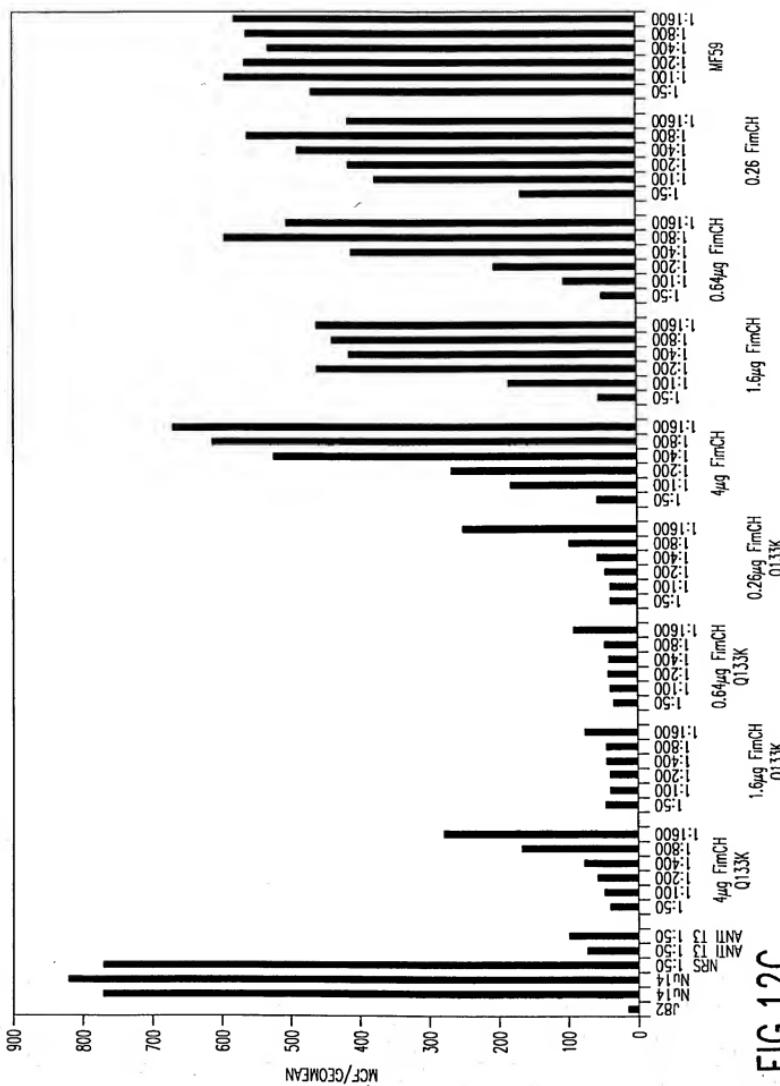
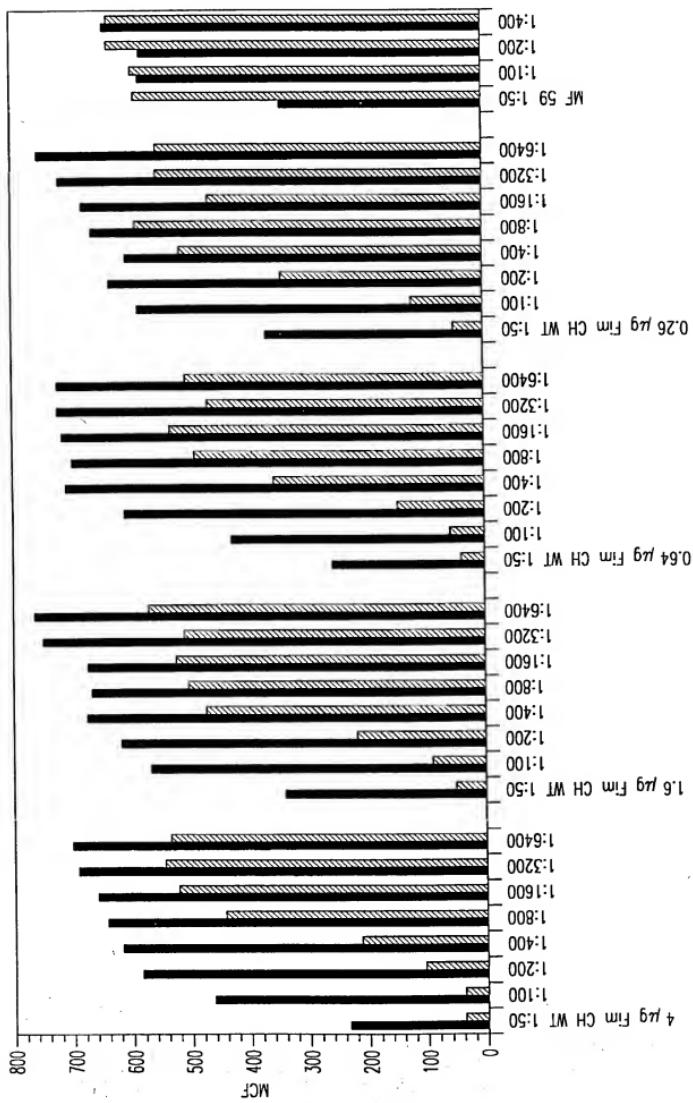


FIG.12D



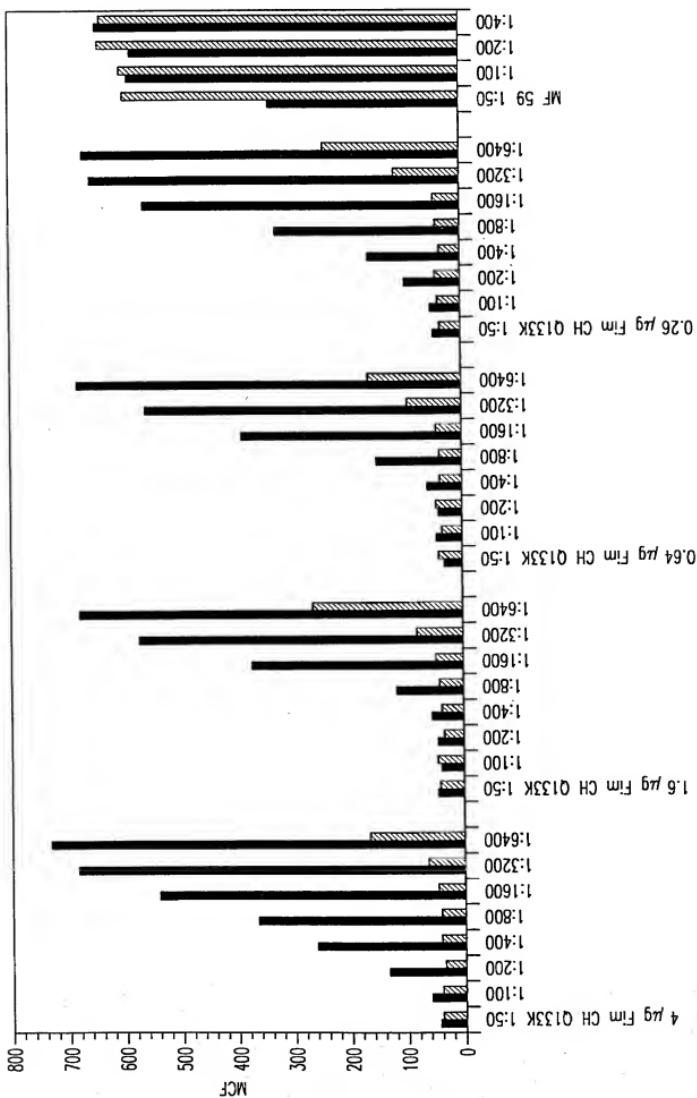


FIG. 12E

10015005 . 051302

Docket No.: 10271-037-999

Serial No.: 10/015,085

Inventor(s): LANGERMANN et al  
Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

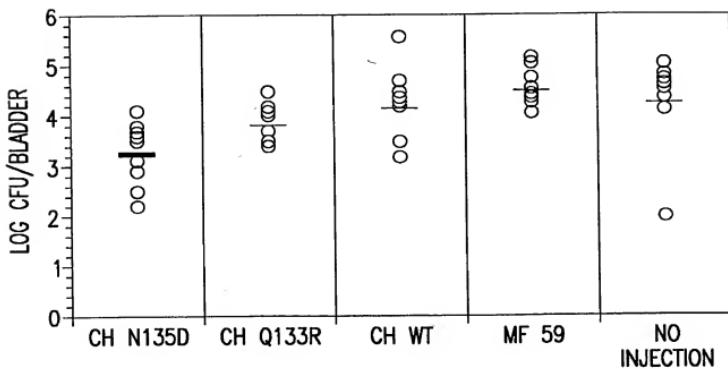


FIG.13

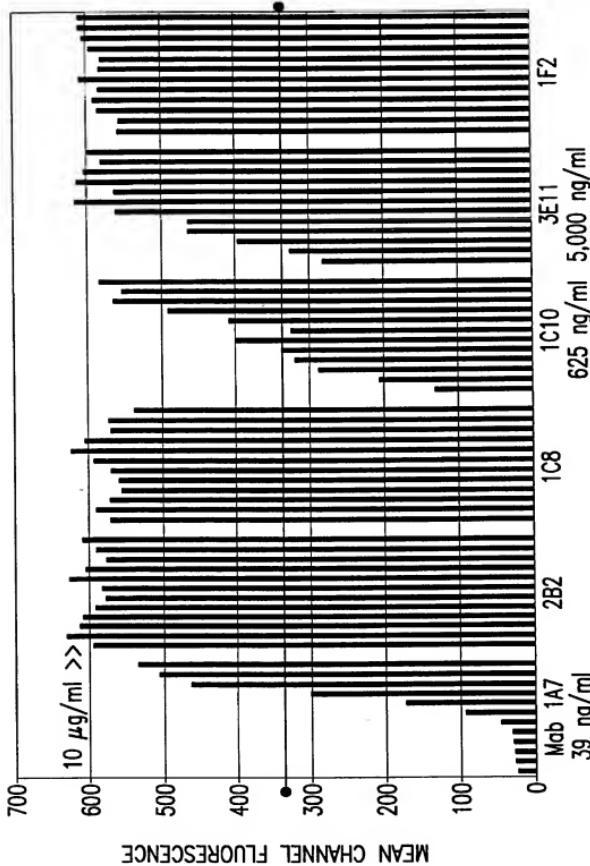


FIG. 14

100015085 · 051302

Docket No.: 10271-037-999

Serial No.: 10/015,085

Inventor(s): LANGERMANN et al.  
Title "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

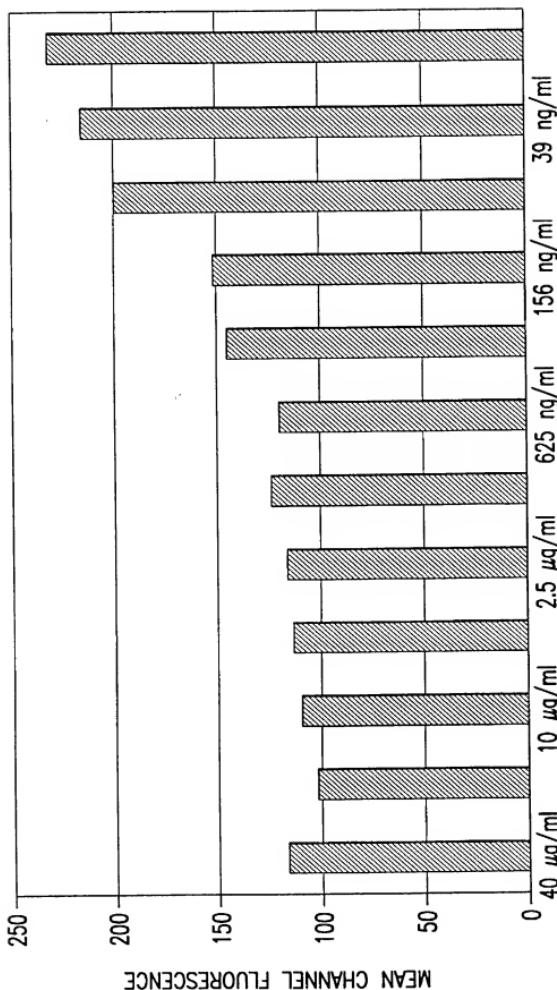


FIG. 15A

10015085.051302

Docket No.: 10271-037-999

- Serial No.: 10/015,085

Inventor(s). LANGERMANN et al.  
Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

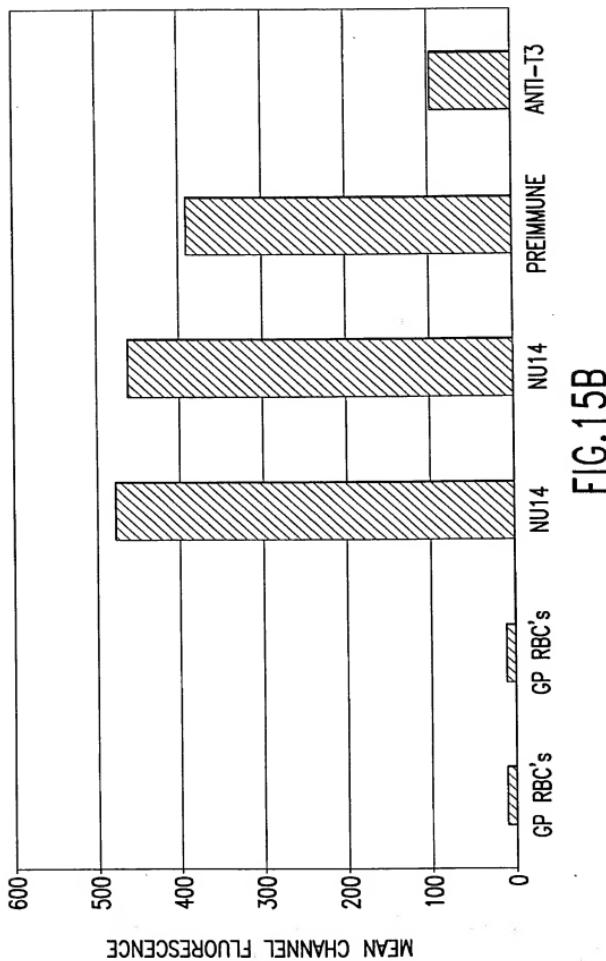


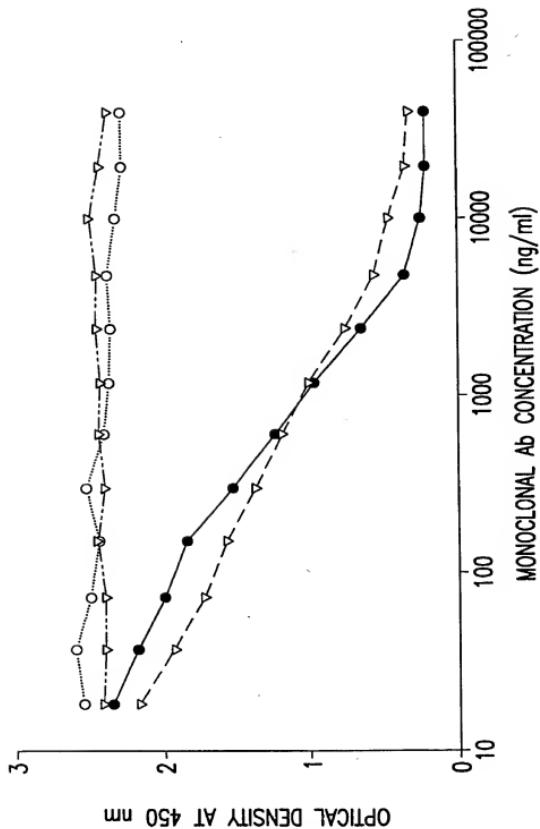
FIG. 15B

DOCKET NO. 10015085

Docket No. 10271-037-999

Serial No. 10015.085

Inventor(s). LANGERMANN et al.  
Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"



10015085.051302

Docket No.: 10271-037-999

Serial No.: 10/015,085

Inventor(s): LANGERMANN et al  
Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

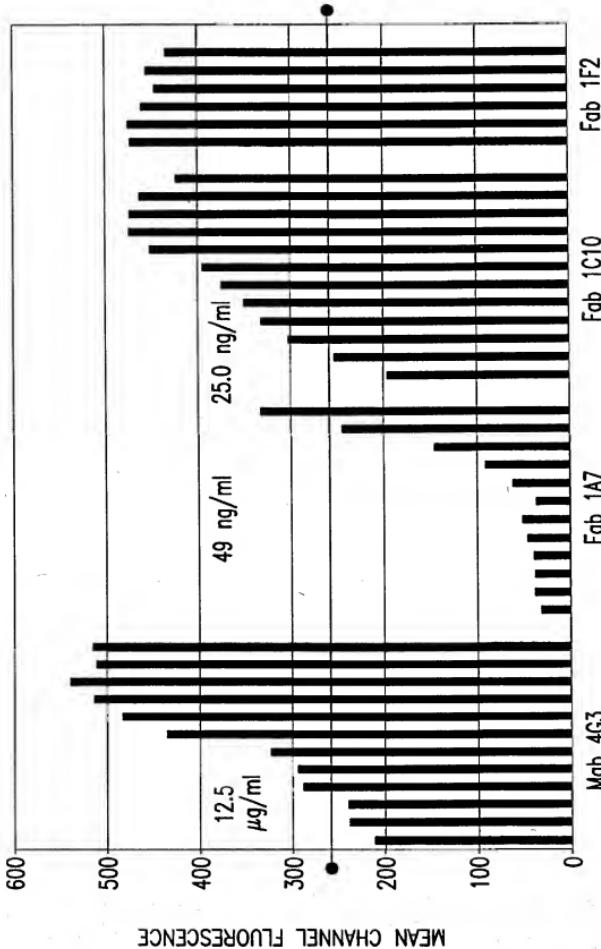


FIG. 17

10015085, 051302

Docket No.: 10271-037-999

Serial No.: 10/015,085

Inventor(s): LANGERMANN et al.  
Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

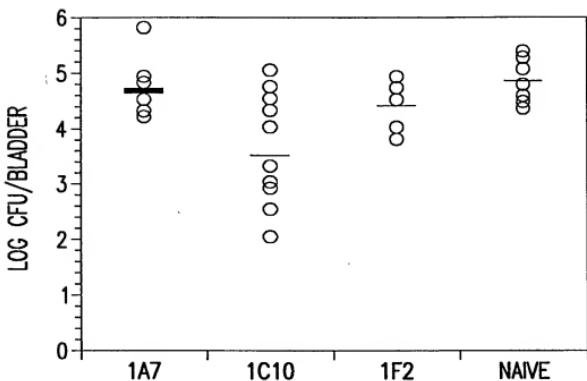


FIG.18

100015085 1051302

Docket No.: 10271-037-999

Serial No.: 10/015,085

Inventor(s): LANGERMANN et al  
Title: "MUTANT PROTEINS, HIGH POTENCY INHIBITORY  
ANTIBODIES, AND FimCH CRYSTAL STRUCTURE"

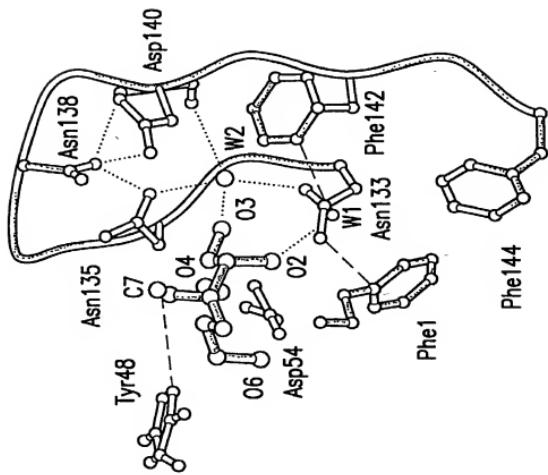


FIG. 19B

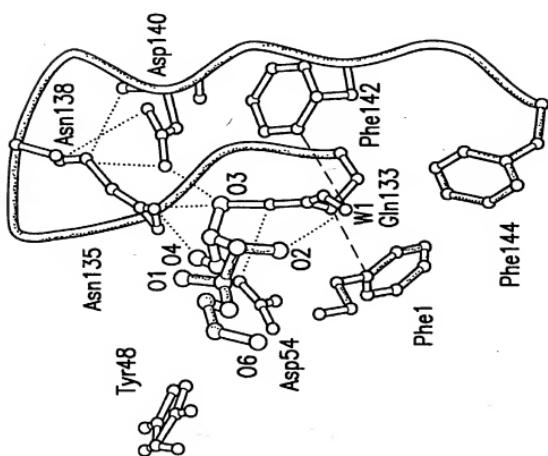


FIG. 19A